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# NOTICE OF ALLOWANCE AND FEE(S) DUE

OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314

EXAMINER

BERNSHTEYN, MICHAEL

ART UNIT PAPER NUMBER

1762

DATE MAILED: 06/20/2011

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,025	09/23/2005	Seiji Tanimoto	277030US0PCT	7360

TITLE OF INVENTION: (METH)ACRYLIC RESIN EMULSION AND PROCESS FOR PRODUCING THE SAME

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	09/20/2011

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

#### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

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III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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#### Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE

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Alexandria, Virginia 22313-1450 (571)-273-2885 or <u>Fax</u>

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address) have its own certificate of mailing or transmission. 22850 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. Certificate of Mailing or Transmission I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below. 1940 DUKE STREET ALEXANDRIA, VA 22314 (Depositor's name (Signature (Date APPLICATION NO. FILING DATE FIRST NAMED INVENTOR ATTORNEY DOCKET NO. CONFIRMATION NO. 10/550.025 09/23/2005 Seiji Tanimoto 277030US0PCT 7360 TITLE OF INVENTION: (METH)ACRYLIC RESIN EMULSION AND PROCESS FOR PRODUCING THE SAME ISSUE FEE DUE PUBLICATION FEE DUE PREV. PAID ISSUE FEE TOTAL FEE(S) DUE DATE DUE APPLN, TYPE SMALL ENTITY NO \$1510 \$300 \$0 \$1810 09/20/2011 nonprovisional ART UNIT CLASS-SUBCLASS **EXAMINER** BERNSHTEYN, MICHAEL 524-556000 1762 1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). 2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required. 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type) PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment. (B) RESIDENCE: (CITY and STATE OR COUNTRY) (A) NAME OF ASSIGNEE Please check the appropriate assignee category or categories (will not be printed on the patent):  $\square$  Individual  $\square$  Corporation or other private group entity  $\square$  Government 4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above) 4a. The following fee(s) are submitted: lssue Fee A check is enclosed. ☐ Publication Fee (No small entity discount permitted) Payment by credit card. Form PTO-2038 is attached. The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_\_ (enclose an extra copy of this for Advance Order - # of Copies \_ (enclose an extra copy of this form). 5. Change in Entity Status (from status indicated above) ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2). a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office. Authorized Signature Date Typed or printed name Registration No. This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and an apparation. Community is governed by 53 0.3.C. 122 and 57 CFR 1.14. Inis collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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			BERNSHTEYN, MICHAEL		
ALEXANDRIA, VA 22314		ART UNIT	PAPER NUMBER		
ALEXANDRIA, V	A 22314				

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 399 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 399 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

### **Privacy Act Statement**

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

- 1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
- 2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
- 3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
- 4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
- 5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
- 6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
- 9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

	Application No.	Applicant(s)
	10/550,025	TANIMOTO ET AL.
Notice of Allowability	Examiner	Art Unit
	MICHAEL M. BERNSHTEYN	1762
The MAILING DATE of this communication apperature All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIOF of the Office or upon petition by the applicant. See 37 CFR 1.313	ears on the cover sheet with the a (OR REMAINS) CLOSED in this a or other appropriate communication IGHTS. This application is subject	correspondence address oplication. If not included on will be mailed in due course. THIS
1. This communication is responsive to <u>06/02/2011</u> .		
2. X The allowed claim(s) is/are <u>14,15,17-19,23,27 and 31-40</u> .		
<ul> <li>3.  Acknowledgment is made of a claim for foreign priority ur</li> <li>a)  All b)  Some* c)  None of the:</li> <li>1.  Certified copies of the priority documents have</li> <li>2.  Certified copies of the priority documents have</li> <li>3.  Copies of the certified copies of the priority documents have</li> <li>International Bureau (PCT Rule 17.2(a)).</li> <li>* Certified copies not received:</li> </ul>	e been received. e been received in Application No.	
Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONM THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.	IENT of this application.	
4. A SUBSTITUTE OATH OR DECLARATION must be subm INFORMAL PATENT APPLICATION (PTO-152) which give		
5. CORRECTED DRAWINGS ( as "replacement sheets") mus	st be submitted.	
(a) 🔲 including changes required by the Notice of Draftspers	son's Patent Drawing Review(PTC	0-948) attached
1) 🗌 hereto or 2) 🔲 to Paper No./Mail Date		
(b) ☐ including changes required by the attached Examiner's Paper No./Mail Date		
Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in t		
6. DEPOSIT OF and/or INFORMATION about the depo attached Examiner's comment regarding REQUIREMENT		
Attachment(s)	5 D Natice of Informed	Detaut Application
<ol> <li>Notice of References Cited (PTO-892)</li> <li>Dotice of Draftperson's Patent Drawing Review (PTO-948)</li> </ol>	<ol> <li>5. ☐ Notice of Informal</li> <li>6. ☐ Interview Summar</li> </ol>	• •
<ol> <li>Information Disclosure Statements (PTO/SB/08),</li> </ol>	Paper No./Mail Day 7. ☐ Examiner's Amend	ate
Paper No./Mail Date		
<ol> <li>Examiner's Comment Regarding Requirement for Deposit of Biological Material</li> </ol>		nent of Reasons for Allowance
/MICHAEL M. BERNSHTEYN/		
Primary Examiner, Art Unit 1762		

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### **DETAILED ACTION**

- 1. This Office Action follows a response filed on June 2, 2011. Claims 14, 15, 18, 19, 23 and 27 have been amended; claim 1-5, 13, 16, 20-22, 24-26 and 29-32 have been cancelled; claims 31-40 have been added
- 2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 2, 2011 has been entered.
- 3. In view of amendment(s) and remarks the rejection of claims 1-5, 13-27, 29 and 30 under 35 U.S.C. 103(a) as being unpatentable over Kim et al. "Poly(vinyl alcohol) Stabilization of Acrylic Emulsion Polymers Using the Miniemulsion Approach", *Macromolecules*, **2003**; 36 (15), p. 5573-5579) in view of Tanimoto et al. (U. S. Patent 6,495,623) has been withdrawn.
- 4. Claims 14, 15, 17-19, 23, 27 and 31-40 are pending.

## Allowable Subject Matter

- 5. Claim 14, 15, 17-19, 23, 27 and 31-40 are allowed.
- 6. The following is examiner's statement of reasons for allowance:

The present claims are allowable over the closest references: Kim et al.

"Poly(vinyl alcohol) Stabilization of Acrylic Emulsion Polymers Using the Miniemulsion

Approach", Macromolecules, 2003; 36 (15), p. 5573-5579) and Tanimoto et al. (U. S. Patent 6,495,623).

Kim discloses a method for producing a (meth) acrylic resin emulsion. The recipe used to prepare the various miniemulsions comprising several different formulation components is shown in Table 1. PVA was dissolved by heating at 90 °C for 3 h in deionized water (ca. 6 wt %), and the solution was filtered using a 200 mesh screen. The solids content of the PVA solution was determined gravimetrically and adjusted to 5.9 wt % by adding deionized water.

Miniemulsions stabilized with HD. A specific amount of HD was mixed with the monomers (BA and MMA). An aqueous PVA solution and DI water were then added to the monomer mixture and stirred for 10 min to prepare a crude emulsion for 10 min prior to subjecting the system to high shear.

Miniemulsions stabilized with CA. A specific amount of CA was mixed with the PVA solution and DI water and then stirred for 2 h at 70 °C. After cooling, undissolved CA particles were found for the higher amounts of CA (0.833 and 1.744 g). Monomers were added and stirred with a magnetic bar for 24 h to completely dissolve the CA particles and to obtain a good crude emulsion. The crude emulsions with HD or CA were sonified using a Branson Sonifier (model 450) at a 70% duty cycle and a power setting of 8 for 10 min accompanied by continuous magnetic stirring in an ice bath. All miniemulsion polymerizations were performed in a 500 ml four-neck flask equipped with a reflux condenser, nitrogen gas inlet tube, and Teflon stirrer (-200 rpm) for 24 h at 60 °C (page 5575).

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Example 1, col. 22, line 48 through col. 23, line 7, etc.).

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Tanimoto discloses a method for producing the (meth) acrylic resin emulsion comprising emulsion (co)polymerization of at least one monomer selected from acrylate monomers and methacrylate monomers, and a vinyl alcohol polymer having at least 1.9 mol% of 1,2-glycol bonds, and a degree of polymerization of from 100 to 2000 and using a redox-type polymerization initiator that comprises a peroxide and a reducing agent (col. 7, lines 62 through col. 8, line 20, col. 13, line 54 through col. 14, line 27,

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However, Kim et al. and Tanimoto et al. do not disclose or fairly suggest the claimed method for producing a (meth)acrylic resin emulsion comprising: redox emulsion (co)polymerizing at least one monomer selected from the group consisting of an acrylate monomer and a methacrylate monomer, and, optionally, a further copolymerizable monomer in the presence of a vinyl alcohol polymer dispersant and a iron compound operable as a catalyst, said vinyl alcohol polymer dispersant having a degree of saponification of from 80 to 95 mol% and a degree of polymerization of from 400 to 2000, particularly said emulsion (co)polymerizing comprising:

- i) feeding into a reactor at <u>an initial stage (1) an iron compound</u>, (2) the monomers, (3) the vinyl alcohol polymer to form a polymerizing system and (4) a reducing agent selected from the group consisting of L(+)-tartaric acid, sodium L(+)-tartrate, and a combination thereof, and
- ii) continuously or intermittently adding to said polymerizing system a peroxide, wherein said acrylate monomer is <u>n-butyl acrylate</u> and said methacrylate monomer is methyl methacrylate, as per newly amended claim 14.

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7. As of the date of this Notice of Allowability, the Examiner has not located or identified any reference that can be used singularly or in combination with another reference including Kim et al. and Tanimoto et al. to render the present invention anticipated or obvious to one of ordinary skill in the art.

8. In the light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delay, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reason for Allowance".

#### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL M. BERNSHTEYN whose telephone number is (571)272-2411. The examiner can normally be reached on M-Th 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael M. Bernshteyn Primary Examiner Art Unit 1762

/Michael M. Bernshteyn/ Primary Examiner, Art Unit 1762